DEISA2: Distributed European Infrastructure for Supercomputing Applications 2

Description

DEISA2, funded under the European Commission's FP7 programme, continued to develop and support distributed high performance computing infrastructure by consolidating the existing infrastructure established during the first phase of the project, DEISA1, and extending the collaborative environment for capability computing and data management. The resulting infrastructure was unmatched in the world in terms of its heterogeneity and complexity, enabling the operation of a powerful supercomputing Grid built on top of national services and facilitating Europe's ability to undertake world-leading computational science research.

The first phase of DEISA demonstrated its importance in advancing computational sciences in leading scientific and industrial disciplines within Europe and paved the way towards the implementation of a cooperative European HPC ecosystem. The existing infrastructure was based on linking eleven leading national supercomputers, using dedicated network interconnections of GÉANT2 and the NRENs.

In DEISA2, activities and services relevant for Application enabling, Operation, and Technologies were continued and enhanced, as these were considered indispensable for the effective support of world-leading computational sciences in the area of supercomputing. The project aimed to extend the service provisioning model from one that supports a single project to one supporting Virtual European Communities. Collaborative activities were to be carried out with new European and other world-leading initiatives. Of strategic importance was the cooperation with the PRACE initiative which, at the time, was preparing for the installation of a limited number of leadership-class Tier-0 supercomputers in Europe. For a lasting future European HPC ecosystem, as suggested by ESFRI (the European Strategy Forum on Research Infrastructures), which integrates national Tier-1 centres and the new Tier-0 centres, DEISA2 aimed to deliver a turnkey operational solution. To achieve this goal, DEISA2 aimed to integerate additional national computing centres as Associated Partners. DEISA2 also aimed to contribute to the interoperation of distributed infrastructures.

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